



DAMES & MOORE

A PROFESSIONAL LIMITED PARTNERSHIP

1846 HOFFMAN STREET, SUITE 101, MADISON, WISCONSIN 53704 (608) 244-1788

July 28, 1989

CONTAINS NO CBI

90-890000580

Document Processing Center
Office of Toxic Substances, TS-790
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Attention: CAIR Reporting Office

Ladies and Gentlemen:

Please find attached the completed CAIR reporting form for the following Woodbridge facility:

Woodbridge Corporation
11 Cermak Road
St. Peters, MO 63376

The applicable reporting deadline for this facility is August 4, 1989 as mentioned in the extension letter received from EPA dated July 12, 1989.

Sincerely,

DAMES & MOORE

John S. Flickinger SIK

John S. Flickinger
Associate

Jeffrey M. Jaekels

Jeffrey M. Jaekels
Chemical Engineer

Attachments

89 AUG -3 AM 9:05
DAMES & MOORE
OFFICE

CONTAINS NO CBI



Form Approved
OMB No. 2010-0019
Approval Expires 12-31-89



000611444K

90-890000580

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Comprehensive Assessment Information Rule
REPORTING FORM

89 AUG -3 AM 9:05
OTS Receipt & Control
Office

When completed, send this form to:

Document Processing Center
Office of Toxic Substances, TS-790
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Attention: CAIR Reporting Office

For Agency Use Only:

Date of Receipt: _____

Document
Control Number: _____

Docket Number: _____

SECTION 1 GENERAL MANUFACTURER, IMPORTER, AND PROCESSOR INFORMATION

PART A GENERAL REPORTING INFORMATION

1.01 This Comprehensive Assessment Information Rule (CAIR) Reporting Form has been completed in response to the Federal Register Notice of..... 12 22 88
CBI mo. day year

☐ a. If a Chemical Abstracts Service Number (CAS No.) is provided in the Federal Register, list the CAS No. 126477-62-5

b. If a chemical substance CAS No. is not provided in the Federal Register, list either (i) the chemical name, (ii) the mixture name, or (iii) the trade name of the chemical substance as provided in the Federal Register.

(i) Chemical name as listed in the rule

(ii) Name of mixture as listed in the rule

(iii) Trade name as listed in the rule

c. If a chemical category is provided in the Federal Register, report the name of the category as listed in the rule, the chemical substance CAS No. you are reporting on which falls under the listed category, and the chemical name of the substance you are reporting on which falls under the listed category.

Name of category as listed in the rule

CAS No. of chemical substance 126477-62-5

Name of chemical substance

1.02 Identify your reporting status under CAIR by circling the appropriate response(s).

CBI Manufacturer 1

☐ Importer 2

Processor (3)

X/P manufacturer reporting for customer who is a processor 4

X/P processor reporting for customer who is a processor 5

☐ Mark (X) this box if you attach a continuation sheet.

1.03 Does the substance you are reporting on have an "x/p" designation associated with it in the above-listed Federal Register Notice?

CBI

☒ Yes ☒ Go to question 1.04

☐ No ☐ Go to question 1.05

1.04 a. Do you manufacture, import, or process the listed substance and distribute it under a trade name(s) different than that listed in the Federal Register Notice? Circle the appropriate response.

CBI

☒ Yes 1

☐ No (2)

b. Check the appropriate box below: 1/2

☐ You have chosen to notify your customers of their reporting obligations

Provide the trade name(s)

☐ You have chosen to report for your customers

☐ You have submitted the trade name(s) to EPA one day after the effective date of the rule in the Federal Register Notice under which you are reporting.

1.05 If you buy a trade name product and are reporting because you were notified of your reporting requirements by your trade name supplier, provide that trade name.

CBI

☐ Trade name LUBRICATE - TSC

Is the trade name product a mixture? Circle the appropriate response.

Yes 1

No (2)

1.06 Certification -- The person who is responsible for the completion of this form must sign the certification statement below:

CBI

☒ "I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate."

Mary J. Valderrama
NAME

Mary J. Valderrama
SIGNATURE

7/29/90
DATE SIGNED

Coordinator Environmental Affairs (314) 279 - 1002
TITLE TELEPHONE NO.

☐ Mark (X) this box if you attach a continuation sheet.

1.07 Exemptions From Reporting -- If you have provided EPA or another Federal agency with the required information on a CAIR Reporting Form for the listed substance within the past 3 years, and this information is current, accurate, and complete for the time period specified in the rule, then sign the certification below. You are required to complete section 1 of this CAIR form and provide any information now required but not previously submitted. Provide a copy of any previous submissions along with your Section 1 submission.

CBI

☐

"I hereby certify that, to the best of my knowledge and belief, all required information which I have not included in this CAIR Reporting Form has been submitted to EPA within the past 3 years and is current, accurate, and complete for the time period specified in the rule."

_____ NAME	_____ SIGNATURE	_____ DATE SIGNED
_____ TITLE	(_____) - TELEPHONE NO.	_____ DATE OF PREVIOUS SUBMISSION

1.08 CBI Certification -- If you have asserted any CBI claims in this report you must certify that the following statements truthfully and accurately apply to all of those confidentiality claims which you have asserted.

CBI

☐

"My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures; the information is not, and has not been, reasonably ascertainable by other persons (other than government bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent; the information is not publicly available elsewhere; and disclosure of the information would cause substantial harm to my company's competitive position."

_____ NAME	_____ SIGNATURE	_____ DATE SIGNED
_____ TITLE	(_____) - TELEPHONE NO.	

☐ Mark (X) this box if you attach a continuation sheet.

1.09 Facility Identification

[illegible]

City

State Zip

Dun & Bradstreet Number [1] [7] - [7] [5] [6] - [2] [6] [2] [5]

EPA ID Number [9][8][7][7][9][6][5][1]

Employer ID Number 32-1776267 [] [] [] [] [] [] [] []

Primary Standard Industrial Classification (SIC) Code[3][0][8][6]

Other SIC Code 219 [] [] [] []

Other SIC Code *n/a* ☐☐☐☐

1.10 Company Headquarters Identification

[] Address [A][D][D][T][E][X][P][R][I][M][O][R][I][U][M] Street

City

State Zip

Dun & Bradstreet Number[7][6]-[7][6][5]-[9][4][3][3]

Employer ID Number() () () () () () () ()

6

1.11 Parent Company Identification

CBI Name [W][O][O][D][B][R][I][D][G][E][S][E][R][V][I][C][E][S][C][O][M][P][A][N][Y] 165

[] Address [4][2][4][2][S][H][E][R][W][O][O][D][S][T][O][W][N][R][L][V][D] Street

Suite 300

[M][I][S][S][I][S][S][A][U][G][A] City

ONTARIO L4Z 2G6

[] State [] Zip

Dun & Bradstreet Number [7][7]-[1][6][5]-[9][8][8][3]

1.12 Technical Contact

CBI Name [M][A][R][Y][V][A][L][D][E][R][R][A][M][A]

[] Title [P][R][O][D][U][C][T][I][O][N][P][L][A][N][N][E][R]

Address [1][1][C][E][R][M][A][C][K][R][E][D] Street

[S][T][E][T][E][R][S] City

[M][D] State [6][3][3][7][6] Zip

Telephone Number [3][7][4]-[2][7][9]-[7][0][0][2]

1.13 This reporting year is from [1][7] [2][9] to [7][0] [8][8]
Mo. Year Mo. Year

[] Mark (X) this box if you attach a continuation sheet.

14. 5

[illegible][illegible]
$$[\overline{}] \overline{} \quad [\overline{}] \overline{} \overline{} \overline{} \overline{}] \text{--} [\overline{}] \overline{} \overline{} \overline{}]$$

Zip

Date of Sale [] [] [] [] [] []

Day

Year

Telephone Number[][]-[][]-[][][][]

44

[illegible]

[] [] [] [] [] [] [] -- [] [] [] []

Zip

[illegible]

Day

Year

Telephone Number[] [] [] - [] [] [] - [] [] [] []

[]

1.16 For each classification listed below, state the quantity of the listed substance that was manufactured, imported, or processed at your facility during the reporting year.

CBI
Classification Quantity (kg/yr)

☐ Manufactured N/A
Imported N/A
Processed (include quantity repackaged) 1.49 million

Of that quantity manufactured or imported, report that quantity:

In storage at the beginning of the reporting year N/A
For on-site use or processing N/A
For direct commercial distribution (including export) N/A
In storage at the end of the reporting year N/A

Of that quantity processed, report that quantity:

In storage at the beginning of the reporting year 0.14 million
Processed as a reactant (chemical producer) N/A
Processed as a formulation component (mixture producer) N/A
Processed as an article component (article producer) 1.51 million
Repackaged (including export) N/A
In storage at the end of the reporting year 76,800

☐ Mark (X) this box if you attach a continuation sheet.

1.17 Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)

[]

Component Name	Supplier Name	Average % Composition by Weight (specify precision, e.g., 45% ± 0.5%)
n/a	n/a	n/a
Total		100%

☐ Mark (X) this box if you attach a continuation sheet.

2.04 State the quantity of the listed substance that your facility manufactured, imported, or processed during the 3 corporate fiscal years preceding the reporting year in descending order.

CBI

☐ Year ending ☐ ☐ ☐ ☐ ☐ ☐
Mo. Year

Quantity manufactured N/A kg

Quantity imported N/A kg

Quantity processed 450 500 kg

Year ending ☐ ☐ ☐ ☐ ☐ ☐
Mo. Year

Quantity manufactured N/A kg

Quantity imported N/A kg

Quantity processed N/A kg

Year ending ☐ ☐ ☐ ☐ ☐ ☐
Mo. Year

Quantity manufactured N/A kg

Quantity imported N/A kg

Quantity processed N/A kg

2.05 Specify the manner in which you manufactured the listed substance. Circle all appropriate process types.

CBI

☐ N/A
Continuous process 1
Semicontinuous process 2
Batch process 3

☐ Mark (X) this box if you attach a continuation sheet.

2.06 Specify the manner in which you processed the listed substance. Circle all appropriate process types.

☐

Continuous process 1

Semicontinuous process 2

Batch process 3

2.07 State your facility's name-plate capacity for manufacturing or processing the listed substance. (If you are a batch manufacturer or batch processor, do not answer this question.)

CBI

☐

Manufacturing capacity N/A kg/yr

Processing capacity 2.5 million kg/yr

2.08 If you intend to increase or decrease the quantity of the listed substance manufactured, imported, or processed at any time after your current corporate fiscal year, estimate the increase or decrease based upon the reporting year's production volume.

CBI

☐

	Manufacturing Quantity (kg)	Importing Quantity (kg)	Processing Quantity (kg)
Amount of increase	<u>N/A</u>	<u>N/A</u>	<u>None Planned</u>
Amount of decrease	<u>N/A</u>	<u>N/A</u>	<u>None Planned</u>

☐ Mark (X) this box if you attach a continuation sheet.

2.09 For the three largest volume manufacturing or processing process types involving the listed substance, specify the number of days you manufactured or processed the listed substance during the reporting year. Also specify the average number of hours per day each process type was operated. (If only one or two operations are involved, list those.)

CBI

☐

	<u>Days/Year</u>	<u>Average Hours/Day</u>
--	------------------	------------------------------

Process Type #1 (The process type involving the largest quantity of the listed substance.)

Manufactured	<u>N/A</u>	<u>N/A</u>
Processed	<u>240</u>	<u>215</u>

Process Type #2 (The process type involving the 2nd largest quantity of the listed substance.)

Manufactured	<u>N/A</u>	<u>N/A</u>
Processed	<u>240</u>	<u>215</u>

Process Type #3 (The process type involving the 3rd largest quantity of the listed substance.)

Manufactured	<u>N/A</u>	<u>N/A</u>
Processed	<u>N/A</u>	<u>N/A</u>

2.10 State the maximum daily inventory and average monthly inventory of the listed substance that was stored on-site during the reporting year in the form of a bulk chemical.

CBI

☐

Maximum daily inventory	_____	kg
Average monthly inventory	_____	kg

☐ Mark (X) this box if you attach a continuation sheet.

2.11 Related Product Types -- List any byproducts, coproducts, or impurities present with the listed substance in concentrations greater than 0.1 percent as it is manufactured, imported, or processed. The source of byproducts, coproducts, or impurities means the source from which the byproducts, coproducts, or impurities are made or introduced into the product (e.g., carryover from raw material, reaction product, etc.).

CBI

☐

N/A

<u>CAS No.</u>	<u>Chemical Name</u>	<u>Byproduct, Coproduct or Impurity¹</u>	<u>Concentration (%) (specify ± % precision)</u>	<u>Source of By-products, Coproducts, or Impurities</u>
	<i>NONE</i>			

¹Use the following codes to designate byproduct, coproduct, or impurity:

B = Byproduct
C = Coproduct
I = Impurity

☐ Mark (X) this box if you attach a continuation sheet.

- 2.12 Existing Product Types -- List all existing product types which you manufactured, imported, or processed using the listed substance during the reporting year. List the quantity of listed substance you use for each product type as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a.	b.	c.	d.
Product Types ¹	% of Quantity Manufactured, Imported, or Processed	% of Quantity Used Captively On-Site	Type of End-Users ²
L	100%	0%	I

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.13 Expected Product Types -- Identify all product types which you expect to manufacture, import, or process using the listed substance at any time after your current corporate fiscal year. For each use, specify the quantity you expect to manufacture, import, or process for each use as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a.	b.	c.	d.
Product Types ¹	% of Quantity Manufactured, Imported, or Processed	% of Quantity Used Captively On-Site	Type of End-Users ²
L	100%	0%	I

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.14 Final Product -- Complete the following table for each type of final product manufactured, imported, or processed at your facility that contains the listed substance other than as an impurity.

☐

a.	b.	c.	d.
Product Type ¹	Final Product's Physical Form ²	Average % Composition of Listed Substance in Final Product	Type of End-Users ³
<i>None</i>			

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the final product's physical form:

A = Gas	F2 = Crystalline solid
B = Liquid	F3 = Granules
C = Aqueous solution	F4 = Other solid
D = Paste	G = Gel
E = Slurry	H = Other (specify) _____
F1 = Powder	

³Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.15 Circle all applicable modes of transportation used to deliver bulk shipments of the
CBI listed substance to off-site customers. *N/A*

- ☐ Truck 1
Railcar 2
Barge, Vessel 3
Pipeline 4
Plane 5
Other (specify) _____ 6

2.16 Customer Use -- Estimate the quantity of the listed substance used by your customers
CBI or prepared by your customers during the reporting year for use under each category
of end use listed (i-iv).

☐ Category of End Use *N/A*

i. Industrial Products

Chemical or mixture *N/A* kg/yr

Article *N/A* kg/yr

ii. Commercial Products

Chemical or mixture *N/A* kg/yr

Article *N/A* kg/yr

iii. Consumer Products

Chemical or mixture *N/A* kg/yr

Article *N/A* kg/yr

iv. Other

Distribution (excluding export) *N/A* kg/yr

Export *N/A* kg/yr

Quantity of substance consumed as reactant *N/A* kg/yr

Unknown customer uses *N/A* kg/yr

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 3 PROCESSOR RAW MATERIAL IDENTIFICATION

PART A GENERAL DATA

3.01 Specify the quantity purchased and the average price paid for the listed substance for each major source of supply listed. Product trades are treated as purchases.
CBI The average price is the market value of the product that was traded for the listed substance.

☐

Source of Supply

Quantity
(kg)

Average Price
(\$/kg)

The listed substance was manufactured on-site.

The listed substance was transferred from a different company site.

The listed substance was purchased directly from a manufacturer or importer.

The listed substance was purchased from a distributor or repackager.

The listed substance was purchased from a mixture producer.

n/a	n/a
n/a	n/a
1.47 million	\$195/kg
n/a	n/a
n/a	n/a

3.02 Circle all applicable modes of transportation used to deliver the listed substance to your facility.

CBI

☐

Truck	1
Railcar	2
Barge, Vessel	3
Pipeline	4
Plane	5
Other (specify) _____	6

☐ Mark (X) this box if you attach a continuation sheet.

3.03 a. Circle all applicable containers used to transport the listed substance to your facility.
CBI

☐

Bags 1
Boxes 2
Free standing tank cylinders 3
Tank rail cars 4
Hopper cars 5
Tank trucks 6
Hopper trucks 7
Drums 8
Pipeline 9
Other (specify) 10

b. If the listed substance is transported in pressurized tank cylinders, tank rail cars, or tank trucks, state the pressure of the tanks.

Tank cylinders 2 1/4 mmHg
Tank rail cars 0 mmHg
Tank trucks 2 1/4 mmHg

☐ Mark (X) this box if you attach a continuation sheet.

PART B RAW MATERIAL IN THE FORM OF A MIXTURE

3.04 If you obtain the listed substance in the form of a mixture, list the trade name(s) of the mixture, the name of its supplier(s) or manufacturer(s), an estimate of the average percent composition by weight of the listed substance in the mixture, and the amount of mixture processed during the reporting year.

CBI

☐

N/A

<u>Trade Name</u>	<u>Supplier or Manufacturer</u>	<u>Average % Composition by Weight (specify \pm % precision)</u>	<u>Amount Processed (kg/yr)</u>
<i>N/A</i>			

☐ Mark (X) this box if you attach a continuation sheet.

PART C RAW MATERIAL VOLUME

3.05 State the quantity of the listed substance used as a raw material during the reporting year in the form of a class I chemical, class II chemical, or polymer, and the percent composition, by weight, of the listed substance.

☐

	Quantity Used (kg/yr)	% Composition by Weight of Listed Sub- stance in Raw Material (specify \pm % precision)
Class I chemical	147 mg	99.7% at 3
Class II chemical	n/a	n/a
Polymer	n/a	n/a

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 4 PHYSICAL/CHEMICAL PROPERTIES

General Instructions:

If you are reporting on a mixture as defined in the glossary, reply to questions in Section 4 that are inappropriate to mixtures by stating "NA -- mixture."

For questions 4.06-4.15, if you possess any hazard warning statement, label, MSDS, or other notice that addresses the information requested, you may submit a copy or reasonable facsimile in lieu of answering those questions which it addresses.

PART A PHYSICAL/CHEMICAL DATA SUMMARY

- 4.01 Specify the percent purity for the three major¹ technical grade(s) of the listed substance as it is manufactured, imported, or processed. Measure the purity of the substance in the final product form for manufacturing activities, at the time you import the substance, or at the point you begin to process the substance.

CBI

☐

	<u>Manufacture</u>	<u>Import</u>	<u>Process</u>
Technical grade #1	<u>n/a</u> % purity	<u>n/a</u> % purity	<u>99.7</u> % purity
Technical grade #2	<u>n/a</u> % purity	<u>n/a</u> % purity	<u>OK</u> % purity
Technical grade #3	<u>n/a</u> % purity	<u>n/a</u> % purity	<u>OK</u> % purity

¹Major = Greatest quantity of listed substance manufactured, imported or processed.

- 4.02 Submit your most recently updated Material Safety Data Sheet (MSDS) for the listed substance, and for every formulation containing the listed substance. If you possess an MSDS that you developed and an MSDS developed by a different source, submit your version. Indicate whether at least one MSDS has been submitted by circling the appropriate response.

Yes (1)

No 2

Indicate whether the MSDS was developed by your company or by a different source.

Your company 1

Another source (2)

☐ Mark (X) this box if you attach a continuation sheet.

4.03 Submit a copy or reasonable facsimile of any hazard information (other than an MSDS) that is provided to your customers/users regarding the listed substance or any formulation containing the listed substance. Indicate whether this information has been submitted by circling the appropriate response.

Yes 1

No 2

4.04 For each activity that uses the listed substance, circle all the applicable number(s) corresponding to each physical state of the listed substance during the activity listed. Physical states for importing and processing activities are determined at the time you import or begin to process the listed substance. Physical states for manufacturing, storage, disposal and transport activities are determined using the final state of the product.

CBI

☐

<u>Activity</u>	Physical State				
	Solid	Slurry	Liquid	Liquified Gas	Gas
Manufacture	1	2	3	4	5
Import	1	2	3	4	5
Process	1	2	3	4	5
Store	1	2	3	4	5
Dispose	1	2	3	4	5
Transport	1	2	3	4	5

☐ Mark (X) this box if you attach a continuation sheet.

4.05 Particle Size -- If the listed substance exists in particulate form during any of the following activities, indicate for each applicable physical state the size and the percentage distribution of the listed substance by activity. Do not include particles ≥ 10 microns in diameter. Measure the physical state and particle sizes for importing and processing activities at the time you import or begin to process the listed substance. Measure the physical state and particle sizes for manufacturing storage, disposal and transport activities using the final state of the product.

CBI

☐

Physical
State

N/A

Manufacture

Import

Process

Store

Dispose

Transport

Dust

<1 micron

1 to <5 microns

5 to <10 microns

Powder

<1 micron

1 to <5 microns

5 to <10 microns

Fiber

<1 micron

1 to <5 microns

5 to <10 microns

Aerosol

<1 micron

1 to <5 microns

5 to <10 microns

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 5 ENVIRONMENTAL FATE

PART A RATE CONSTANTS AND TRANSFORMATION PRODUCTS

5.01 Indicate the rate constants for the following transformation processes.

a. Photolysis:

Absorption spectrum coefficient (peak) 871 (1/M cm) at 284 nm

Reaction quantum yield, ϕ NO INFORMATION at _____ nm

Direct photolysis rate constant, k_p , at ... $< 1.2 \times 10^{-3}$ 1/hr WHEN NO₂ PRESENT
PHOTOLYSIS RATE IS 0.37/HR⁽²⁾

b. Oxidation constants at 25°C:

For 1O_2 (singlet oxygen), k_{ox} NO INFORMATION 1/M hr

For RO_2 (peroxy radical), k_{ox} NO INFORMATION 1/M hr

c. Five-day biochemical oxygen demand, BOD_5 ... NOT APPLICABLE DUE TO mg/l
REACTION WITH WATER

d. Biotransformation rate constant:

For bacterial transformation in water, k_b ... NO OXYGEN CONSUMED 1/hr

Specify culture IN MODIFIED MITI TEST⁽³⁾

e. Hydrolysis rate constants:

For base-promoted process, k_b NO INFORMATION 1/M hr

For acid-promoted process, k_a NO INFORMATION 1/M hr

For neutral process, k_n NO INFORMATION 1/hr

f. Chemical reduction rate (specify conditions) NOT EXPECTED

g. Other (such as spontaneous degradation) ... POLYUREA FORMATION UNDER
HYDROLYTIC CONDITIONS⁽⁴⁾

☐ Mark (X) this box if you attach a continuation sheet.

PART B PARTITION COEFFICIENTS

5.02 a. Specify the half-life of the listed substance in the following media.

Media	Half-life (specify units)
Groundwater	<< 1 DAY IN WATER SOLUTION (4)
Atmosphere	26 HR (2)
Surface water	<< 1 DAY IN WATER SOLUTION (4)
Soil	< 1 DAY (4)

b. Identify the listed substance's known transformation products that have a half-life greater than 24 hours.

CAS No.	Name	Half-life (specify units)	Media
NOT FOUND	POLYUREA	> 1 YR	in WATER & SOIL (4)
95-80-7	2,4-TOLUENE DIAMINE	< 1 DAY	} in BIOLOGICAL WASTE-
823-40-5	2,6-TOLUENE DIAMINE	< 1 DAY	
5206-52-0	UREA, N,N'-BIS(3-ISOCYANATO-4-METHYLPHENYL)-		in WATER TREATMENT PLANT (5)(6)
UNKNOWN HALF-LIFE			

5.03 Specify the octanol-water partition coefficient, K_{ow} ... REACTS WITH BOTH at 25°C

Method of calculation or determination OCTANOL AND WATER

5.04 Specify the soil-water partition coefficient, K_d REACTS WITH WATER at 25°C

Soil type

5.05 Specify the organic carbon-water partition coefficient, K_{oc} REACTS WITH WATER at 25°C

5.06 Specify the Henry's Law Constant, H REACTS WITH WATER atm-m³/mole

☐ Mark (X) this box if you attach a continuation sheet.

- 5.07 List the bioconcentration factor (BCF) of the listed substance, the species for which it was determined, and the type of test used in deriving the BCF.

Bioconcentration Factor	Species	Test ¹
<u>NONE DETECTED</u>	<u>MOINA MACROCOPA STRAUS</u>	<u>NOT DEFINED (4)</u>
<u>NONE DETECTED</u>	<u>CYPRINUS CARPIO</u>	<u>NOT DEFINED (4)</u>

¹Use the following codes to designate the type of test:

F = Flowthrough
S = Static

- (1) PHILLIPS AND NACHOD, EDS., ORGANIC ELECTRONIC SPECTRAL DATA, VOL IV, PG 200.
- (2) K.H. BECKER, V. BASTIAN AND TH. KLEIN, THE REACTIONS OF TOLUENEDIISOCYANATE, TOLUENEDIAMINE AND METHYLENEDIANILINE UNDER SIMULATED ATMOSPHERIC CONDITIONS, J. PHOTOCHEM. AND PHOTOBIOLOG., A: CHEMISTRY, 45 (1988) 195-205
- (3) N. CASPERS, B. HAMBURGER, R. KANNE AND WAKLEBERT, ECOTOXICITY OF TDI, MDI, TDA AND MDA, REPORT TO THE INTERNATIONAL ISOCYANATE INSTITUTE, E-CE-41, 1986. QUOTED IN D.S. GILBERT, FATE OF TDI AND MDI IN AIR, SOIL AND WATER, POLYURETHANES WORLD CONGRESS 1987, PROCEEDINGS OF THE SPI/FSK.
- (4) F.K. BROCHHAGEN AND B.M. GRIEVEDON, ENVIRONMENTAL ASPECTS OF ISOCYANATES IN WATER AND SOIL, CELLULAR POLYMERS, 3 (1984) 11-17.
- (5) K. MARCALI, MICRODETERMINATION OF TOLUENEDIISOCYANATE IN ATMOSPHERE, ANAL. CHEM. 29 (1957) 552-558.
- (6) G.A. CAMPBELL, T.J. DEARLOVE AND W.C. MELUCH, DI(ISO-CYANATO-TOLYL)UREA, U.S. PATENT 3,906,019 (1975), CHEM. ABS. 84:5645h.

NOTE: ALL INFORMATION SUBMITTED IN SECTION 5 OBTAINED FROM MOBAY CORP.

☐ Mark (X) this box if you attach a continuation sheet.

6.04 For each market listed below, state the quantity sold and the total sales value of
CBI the listed substance sold or transferred in bulk during the reporting year.

☐

<u>Market</u>	<u>Quantity Sold or Transferred (kg/yr)</u>	<u>Total Sales Value (\$/yr)</u>
Retail sales	_____	_____
Distribution -- Wholesalers	_____	_____
Distribution -- Retailers	_____	_____
Intra-company transfer	_____	_____
Repackagers	_____	_____
Mixture producers	_____	_____
Article producers	_____	_____
Other chemical manufacturers or processors	_____	_____
Exporters	_____	_____
Other (specify) _____	_____	_____

6.05 Substitutes -- List all known commercially feasible substitutes that you know exist
for the listed substance and state the cost of each substitute. A commercially
CBI feasible substitute is one which is economically and technologically feasible to use
in your current operation, and which results in a final product with comparable
performance in its end uses.

☐

<u>Substitute</u>	<u>Cost (\$/kg)</u>
<i>None Known</i>	_____
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 7 MANUFACTURING AND PROCESSING INFORMATION

General Instructions:

For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

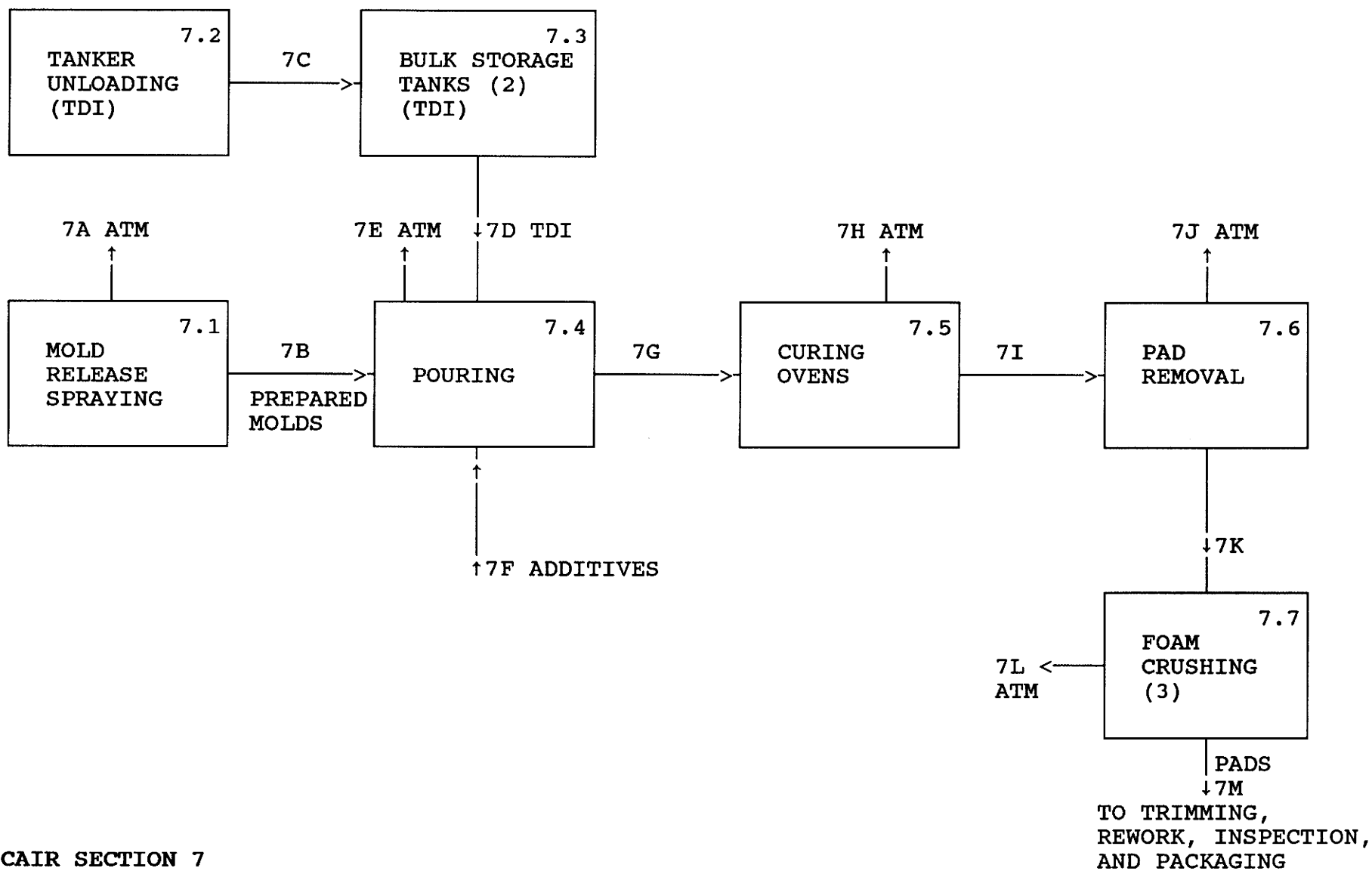
PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

7.01 In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.

CBI

☐ Process type Processing From Production Line 1

☐ Mark (X) this box if you attach a continuation sheet.



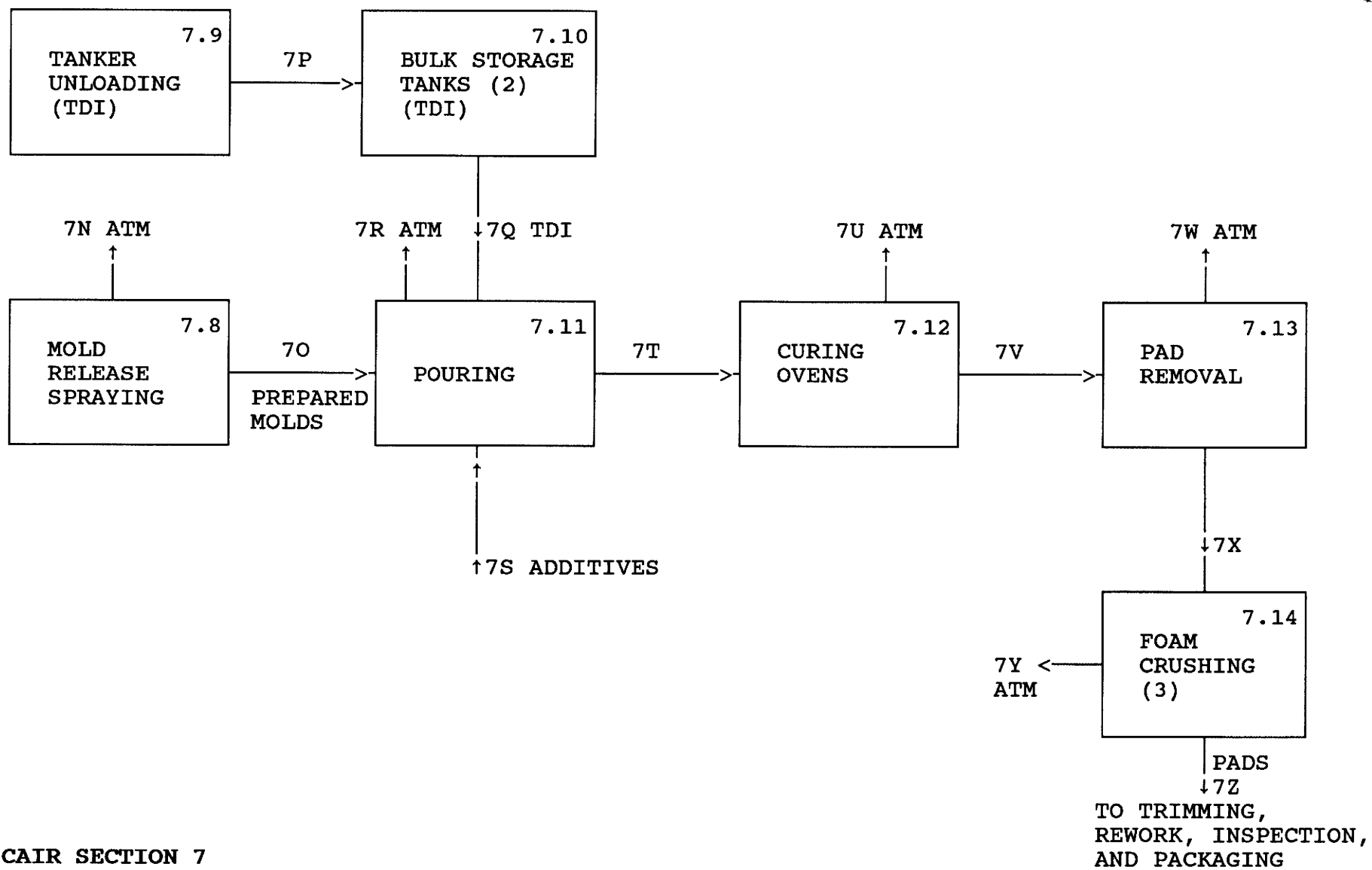
CAIR SECTION 7
 PROCESS FLOW DIAGRAM - LINE 1
 WOODBRIDGE GROUP
 ST. PETERS, MISSOURI

7.03 In accordance with the instructions, provide a process block flow diagram showing all process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if not treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

☐ Process type Polystyrene Foam Production Line 2

☐ Mark (X) this box if you attach a continuation sheet.



CAIR SECTION 7
 PROCESS FLOW DIAGRAM - LINE 2
 WOODBRIDGE GROUP
 ST. PETERS, MISSOURI

1/2
7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Polyethylene Foam Production Line 1

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
7.1	Seal Booth	24	760	N/A
7.2	Roller, HRC	Inert	1292	Stainless Steel, Rubber
7.3	Storage Tanks	24	760	Stainless Steel
7.4	Roll Booth	24	760	N/A
7.5	Cover	65.6	760	N/A
7.6	Denuded Deck	24	760	N/A
7.7	Crosser	24	760	N/A

☒ Mark (X) this box if you attach a continuation sheet.

2/2

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Boilerhouse Fan Process Line 2

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
7.8	Spray Booth	24	760	N/A
7.9	Rail Car, Hose	24-26	1292	STAINLESS STEEL, RUBBER
7.10	Storage Tanks	24	760	STAINLESS STEEL
7.11	Pack Booth	24	760	N/A
7.12	Drum	696	760	N/A
7.13	Demolition Area	24	760	N/A
7.14	Crusher	24	760	N/A

☐ Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type POLYURETHANE Foam Production Line 1

Process Stream ID Code	Process Stream Description	Physical State ¹	Stream Flow (kg/yr)
74	Mold Spraying Exhaust	GU	106 million
75	Mold	SO	N/A
76	Tank Loading Line	OL	0.75 million
77	Lyngby Feed	OL	0.75 million
78	Pouring Exhaust	GU	211 million
79	Accumulator Pressure 1	OL	1.85 million
76	Foam Pump	SO	2.6 million
78	Over Exhaust	GU	264 million

¹Use the following codes to designate the physical state for each process stream:

- GC = Gas (condensable at ambient temperature and pressure)
- GU = Gas (uncondensable at ambient temperature and pressure)
- SO = Solid
- SY = Sludge or slurry
- AL = Aqueous liquid
- OL = Organic liquid
- IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☒ Mark (X) this box if you attach a continuation sheet.

2/4

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Polyethylene Foam Production Line 1

Process Stream ID Code	Process Stream Description	Physical State ¹	Stream Flow (kg/yr)
7J	Foam Pads	SO	2.6 million
7L	Demold Exhaust	GU	132 million
7K	Foam Pads	SO	2.6 million
7L	CRUSHER EXHAUST	GU	132 million
7M	Foam Pads	SO	2.6 million

¹Use the following codes to designate the physical state for each process stream:

GC = Gas (condensable at ambient temperature and pressure)
 GU = Gas (uncondensable at ambient temperature and pressure)
 SO = Solid
 SY = Sludge or slurry
 AL = Aqueous liquid
 OL = Organic liquid
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☒ Mark (X) this box if you attach a continuation sheet.

3/4
7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type POLYURETHANE Foam Production Line 2

Process Stream ID Code	Process Stream Description	Physical State ¹	Stream Flow (kg/yr)
<u>7N</u>	<u>MOLD SPRAYING EXHAUST</u>	<u>GU</u>	<u>106 million</u>
<u>7O</u>	<u>MOLDS</u>	<u>SO</u>	<u>N/A</u>
<u>7P</u>	<u>TANK LOADING LINE</u>	<u>OL</u>	<u>0.75 million</u>
<u>7R</u>	<u>LUBRICATE FEED</u>	<u>OL</u>	<u>0.75 million</u>
<u>7R</u>	<u>POURING EXHAUST</u>	<u>GU</u>	<u>158 million</u>
<u>7S</u>	<u>ADDITIONAL PROCESS 1</u>	<u>OL</u>	<u>1.85 million</u>
<u>7T</u>	<u>FEED FEEDS</u>	<u>SO</u>	<u>2.6 million</u>
<u>7U</u>	<u>OVEN EXHAUST</u>	<u>GU</u>	<u>364 million</u>

¹Use the following codes to designate the physical state for each process stream:

GC = Gas (condensable at ambient temperature and pressure)
 GU = Gas (uncondensable at ambient temperature and pressure)
 SO = Solid
 SY = Sludge or slurry
 AL = Aqueous liquid
 OL = Organic liquid
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☒ Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Recovery of Tannin Residues Line 2

Process Stream ID Code	Process Stream Description	Physical State ¹	Stream Flow (kg/yr)
7V	Foam Pads	SO	2.6 million
7W	Condensate	GU	105 million
7X	Foam Pads	SO	2.6 million
7Y	Condensate	GU	105 million
7Z	Foam Pads	SO	2.6 million

¹Use the following codes to designate the physical state for each process stream:

GC = Gas (condensable at ambient temperature and pressure)
 GU = Gas (uncondensable at ambient temperature and pressure)
 SO = Solid
 SY = Sludge or slurry
 AL = Aqueous liquid
 OL = Organic liquid
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☐ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Polystyrene Foam Production Line I

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7A</u>	<u>AIR</u>	<u>99.99%</u>	<u>NAPHTHA</u>	<u>12.00 ppmw</u>
<u>7B</u>	<u>Alkyls</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>7C</u>	<u>TOLUENE 2,6 DIISOCYANATE 20%</u>	<u>20%</u>	<u>20%</u>	<u>N/A</u>
	<u>TOLUENE 2,4 DIISOCYANATE 80%</u>	<u>80%</u>		

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Polystyrene Film Production Line 1

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7D</u>	<u>Toluene 2,6-Dichlorobenzene</u>	<u>80%</u>	<u>CH</u>	<u>N/A</u>
	<u>Toluene 2,4-Dichlorobenzene</u>	<u>20%</u>		
<u>7E</u>	<u>Air</u>	<u>99.99%</u>	<u>Trace Dichlorobenzene</u>	<u>0.0005 ppmw</u>
			<u>Dichlorobenzene</u>	<u>0.03 ppmw</u>
				<u>(E)(w)</u>
<u>7F</u>	<u>Spent Solvent #1</u>	<u>9%</u>	<u>N/A</u>	<u>N/A</u>

7.06 continued below

☐ Mark (X) this box if you attach a continuation sheet.

3/10

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type POLYURETHANE Foam Production Line 1

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>76</u>	<u>Foam Pads</u>	<u>100%</u>	<u>None</u>	<u>N/A</u>
<u>77</u>	<u>Air</u>	<u>100%</u>	<u>Isocyanate</u>	<u>0.0005 ppmw</u>
			<u>Diphenylmethane</u>	<u>0.002 ppmw</u>
				<u>(6) (u)</u>
<u>78</u>	<u>Foam Pads</u>	<u>100%</u>	<u>None</u>	<u>N/A</u>

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

410
7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Polycarbonate Foam Production Line 1

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7J</u>	<u>Air</u>	<u>99.99%</u>	<u>TOLUENE DIISULFONATE</u>	<u>0.003 ppmw</u>
			<u>DICHLORAMINE</u>	<u>0.1 ppmw</u>
				<u>(EXW)</u>
<u>7K</u>	<u>Foam Pore</u>	<u>100%</u>	<u>n/a</u>	<u>n/a</u>
<u>7L</u>	<u>Air</u>	<u>99.99%</u>	<u>TOLUENE DIISULFONATE</u>	<u>0.002 ppmw</u>
			<u>DICHLORAMINE</u>	<u>0.25 ppmw</u>
				<u>(EXW)</u>

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

5/12

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Recovering Foam Recovering Line 1

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>701</u>	<u>Foam Recovering</u>	<u>100%</u>	<u>N/A</u>	<u>N/A</u>

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

610

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Polycarbonate Film Production Line 2

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7A</u>	<u>AIR</u>	<u>99.99%</u>	<u>N/A</u>	<u>1100 ppmw</u> <u>(E)(W)</u>
<u>70</u>	<u>WATER</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>
<u>7P</u>	<u>TOLENE 2,6-DISOCYANATE</u>	<u>20%</u>	<u>None</u>	<u>n/a</u>
	<u>TOLENE 2,4-DISOCYANATE</u>	<u>20%</u>		

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Polyurethane Foam Production Line 2

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7Q</u>	<u>Toluene 2,6-DIISOCYANATE</u>	<u>20%</u>	<u>100%</u>	<u>N/A</u>
	<u>TOLUENE 2,4-DIISOCYANATE</u>	<u>2.2%</u>		
<u>7R</u>	<u>AIR</u>	<u>100%</u>	<u>Toluene DIISOCYANATE</u>	<u>0.001 ppmw</u>
			<u>DIETHYLENEDIAMINE</u>	<u>0.001 ppmw</u>
				<u>(E)(W).</u>
<u>7S</u>	<u>Acrylic Polymer #1</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

5/10

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Detergents from Production Line 2

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7T</u>	<u>Foam Pads</u>	<u>100%</u>	<u>N/A</u>	<u>N/A</u>
<u>7U</u>	<u>AIR</u>	<u>100%</u>	<u>TRICHLOROETHANE</u> <u>DIMETHYLAMINE</u>	<u>2,225 ppmw</u> <u>0.22 ppmw</u> <u>(E/W)</u>
<u>7V</u>	<u>Foam Pads</u>	<u>100%</u>	<u>N/A</u>	<u>N/A</u>

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type SECRETANOL Foam Production Line 2

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7W</u>	<u>AIR</u>	<u>100%</u>	<u>Toluene Diisocyanate</u>	<u>0.004 ppmw</u>
			<u>Diethylene Glycol</u>	<u>0.1 ppmw</u>
				<u>(6)(w)</u>
<u>7X</u>	<u>Foam Box</u>	<u>100%</u>	<u>n/a</u>	<u>n/a</u>
<u>7Y</u>	<u>AIR</u>	<u>99.9%</u>	<u>Toluene Diisocyanate</u>	<u>0.002 ppmw</u>
			<u>Diethylene Glycol</u>	<u>0.05 ppmw</u>
				<u>(6)(w)</u>

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

CBI

[

[illegible]

7.06 continued below

[]

7.06 (continued)

¹For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column b. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
<u>1</u>	<u>Polysil</u>	<u>92.4 % (E)(W)</u>
	<u>Dithionamide</u>	<u>1.5 % (E)(W)</u>
	<u>Carbon</u>	<u>0.5 % (E)(W)</u>
<u>2</u>	<u>Water</u>	<u>3.8 % (E)(W)</u>
	<u>Surfactant</u>	<u>1.3 % (E)(W)</u>
<u>3</u>		
<u>4</u>		
<u>5</u>		

²Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

³Use the following codes to designate how the concentration was measured:

V = Volume
W = Weight

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 8 RESIDUAL TREATMENT GENERATION, CHARACTERIZATION, TRANSPORTATION, AND MANAGEMENT

General Instructions:

For questions 8.04-8.06, provide a separate response for each residual treatment block flow diagram provided in question 8.01, 8.02 or 8.03. Identify the process type from which the information is extracted.

For questions 8.05-8.33, the Stream Identification Codes are those process streams listed in either the Section 7 or Section 8 block flow diagrams which contain residuals for each applicable waste management method.

For questions 8.07-8.33, if residuals are combined before they are handled, list those Stream Identification Codes on the same line.

Questions 8.09-8.33 refer to the waste management activities involving the residuals identified in either the Section 7 or Section 8 block flow diagrams. Not all Stream Identification Codes used in the sample answers (e.g., for the incinerator questions) have corresponding process streams identified in the block flow diagram(s). These Stream Identification codes are for illustrative purposes only.

For questions 8.11-8.33, if you have provided the information requested on one of the EPA Office of Solid Waste surveys listed below within the three years prior to your reporting year, you may submit a copy or reasonable facsimile in lieu of answering those questions which the survey addresses. The applicable surveys are: (1) Hazardous Waste Treatment, Storage, Disposal, and Recycling Survey; (2) Hazardous Waste Generator Survey; or (3) Subtitle D Industrial Facility Mail Survey.

☐ Mark (X) this box if you attach a continuation sheet.

PART A RESIDUAL TREATMENT PROCESS DESCRIPTION

8.01 In accordance with the instructions, provide a residual treatment block flow diagram which describes the treatment process used for residuals identified in question 7.01.

CBI

☐ Process type N/A - No excess Res. Cons.

☐ Mark (X) this box if you attach a continuation sheet.

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

a.	b.	c.	d.	e.	f.	g.
Stream ID Code	Type of Hazardous Waste ¹	Physical State of Residual ²	Known Compounds ³	Concentra- tions (% or ppm) ^{4, 5, 6}	Other Expected Compounds	Estimated Concen- trations (% or ppm)

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

¹Use the following codes to designate the type of hazardous waste:

I = Ignitable
C = Corrosive
R = Reactive
E = EP toxic
T = Toxic
H = Acutely hazardous

²Use the following codes to designate the physical state of the residual:

GC = Gas (condensable at ambient temperature and pressure)
GU = Gas (uncondensable at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

³For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column d. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1		
2		
3		
4		
5		

⁴Use the following codes to designate how the concentration was determined:

A = Analytical result

E = Engineering judgement/calculation

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

⁵Use the following codes to designate how the concentration was measured:

V = Volume

W = Weight

⁶Specify the analytical test methods used and their detection limits in the table below. Assign a code to each test method used and list those codes in column e.

<u>Code</u>	<u>Method</u>	<u>Detection Limit</u> <u>(± ug/l)</u>
<u>1</u>	<hr/>	<hr/>
<u>2</u>	<hr/>	<hr/>
<u>3</u>	<hr/>	<hr/>
<u>4</u>	<hr/>	<hr/>
<u>5</u>	<hr/>	<hr/>
<u>6</u>	<hr/>	<hr/>

☐ Mark (X) this box if you attach a continuation sheet.

CBI

[illegible]

²Use the codes provided in Exhibit 8-2 to designate the management methods

58

8.22 Describe the combustion chamber design parameters for each of the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

☐

Incinerator	Combustion Chamber Temperature (°C)		Location of Temperature Monitor		Residence Time In Combustion Chamber (seconds)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
1						
2						
3						

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

8.23 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

☐

Incinerator	Air Pollution Control Device ¹	Types of Emissions Data Available
1	<i>n/a</i>	<i>n/a</i>
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

¹Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)

E = Electrostatic precipitator

O = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

PART A EMPLOYMENT AND POTENTIAL EXPOSURE PROFILE

9.01 Mark (X) the appropriate column to indicate whether your company maintains records on the following data elements for hourly and salaried workers. Specify for each data element the year in which you began maintaining records and the number of years the records for that data element are maintained. (Refer to the instructions for further explanation and an example.)

CBI

☐

Data Element	Data are Maintained for:		Year in Which Data Collection Began	Number of Years Records Are Maintained
	Hourly Workers	Salaried Workers		
Date of hire	X	X	1987	INDEFINITELY
Age at hire	X	X	1987	INDEFINITELY
Work history of individual before employment at your facility	X	X	1987	INDEFINITELY
Sex	X	X	1987	INDEFINITELY
Race	X	X	1987	INDEFINITELY
Job titles	X	X	1987	INDEFINITELY
Start date for each job title	X	X	1987	INDEFINITELY
End date for each job title	X	X	1987	INDEFINITELY
Work area industrial hygiene monitoring data	X	X	1987	INDEFINITELY
Personal employee monitoring data	X	X	1987	INDEFINITELY
Employee medical history	X	X	1987	INDEFINITELY
Employee smoking history	X	X	1987	INDEFINITELY
Accident history	X	X	1987	INDEFINITELY
Retirement date	X	X	1987	INDEFINITELY
Termination date	X	X	1987	INDEFINITELY
Vital status of retirees	X	X	1987	INDEFINITELY
Cause of death data	X	X	1987	INDEFINITELY

☐ Mark (X) this box if you attach a continuation sheet.

9.02 In accordance with the instructions, complete the following table for each activity in which you engage.

CBI

☐

a.	b.	c.	d.	e.
<u>Activity</u>	<u>Process Category</u>	<u>Yearly Quantity (kg)</u>	<u>Total Workers</u>	<u>Total Worker-Hours</u>
Manufacture of the listed substance	Enclosed	N/A	N/A	N/A
	Controlled Release	N/A	N/A	N/A
	Open	N/A	N/A	N/A
On-site use as reactant	Enclosed	N/A	N/A	N/A
	Controlled Release	1,490 million	12	192
	Open	N/A	N/A	N/A
On-site use as nonreactant	Enclosed	N/A	N/A	N/A
	Controlled Release	N/A	N/A	N/A
	Open	N/A	N/A	N/A
On-site preparation of products	Enclosed	N/A	N/A	N/A
	Controlled Release	N/A	N/A	N/A
	Open	N/A	N/A	N/A

☐ Mark (X) this box if you attach a continuation sheet.

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

☐

Labor Category

Descriptive Job Title

A

CHEMICAL HANDLER

B

PROCESS ENGINEER

C

D

E

F

G

H

I

J

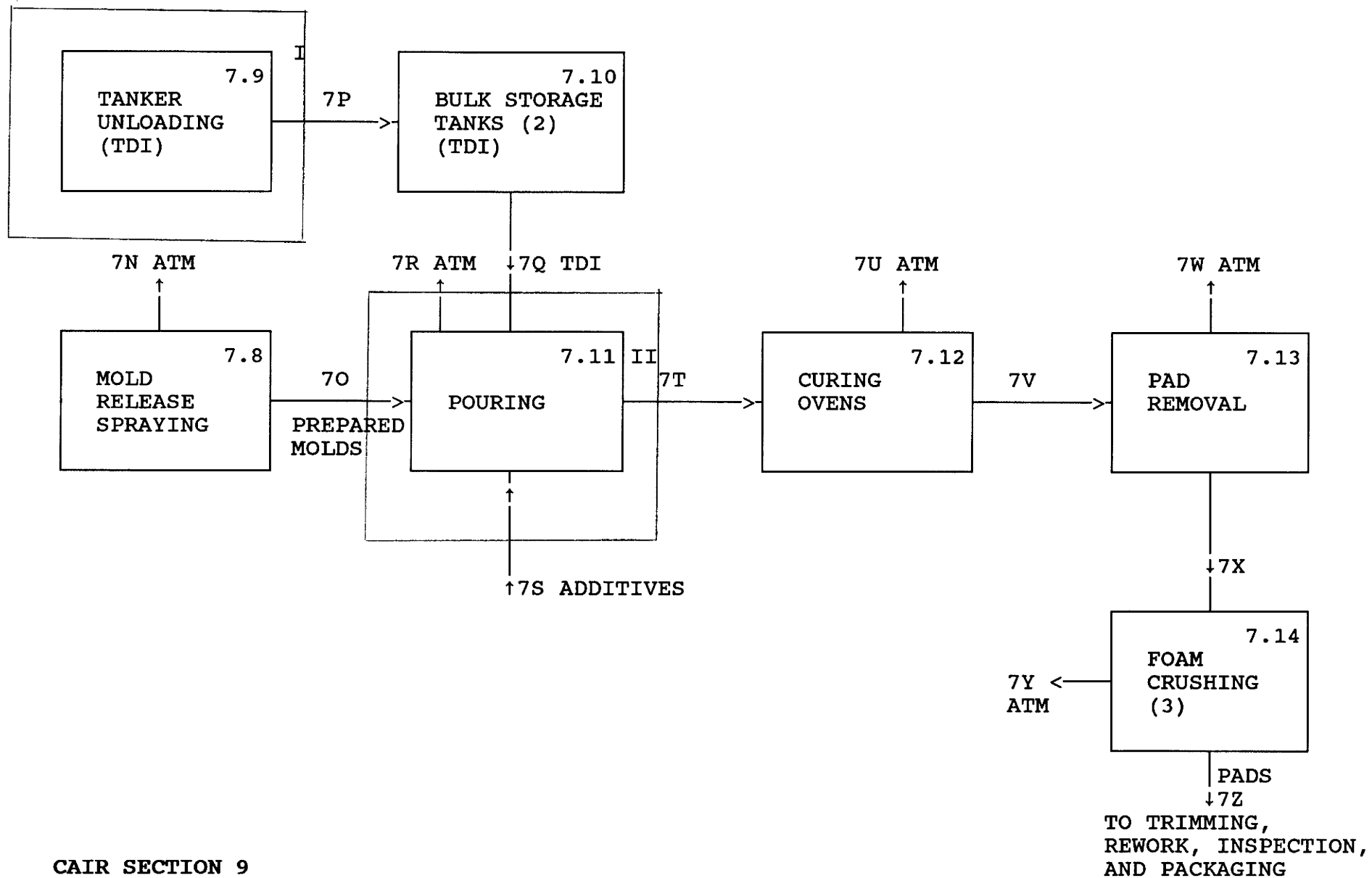
☐ Mark (X) this box if you attach a continuation sheet.

9.04 In accordance with the instructions, provide your process block flow diagram(s) and indicate associated work areas.

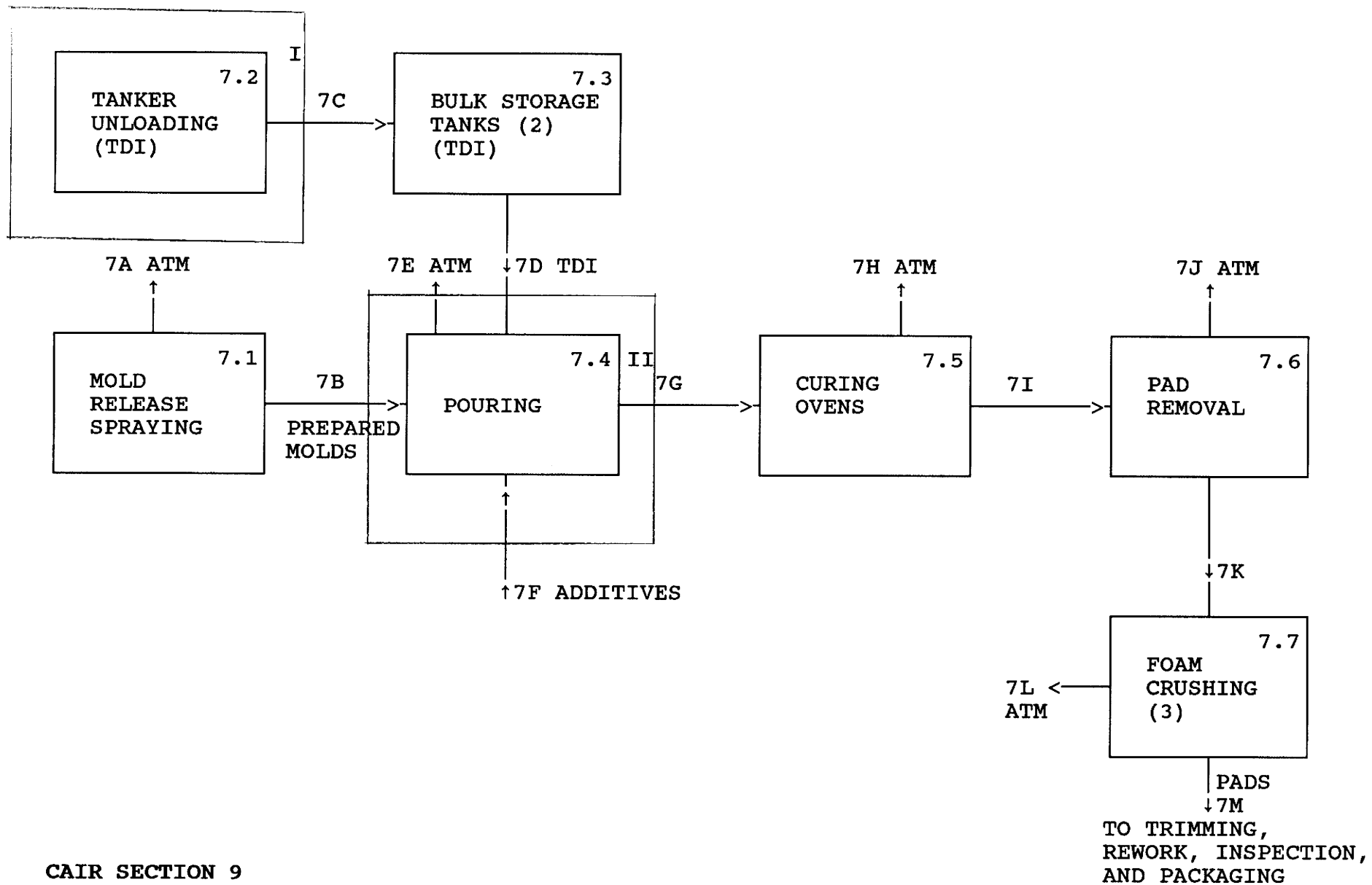
CBI

☐ Process type _____

☐ Mark (X) this box if you attach a continuation sheet.



CAIR SECTION 9
 PROCESS FLOW DIAGRAM - LINE 2
 WOODBRIDGE GROUP
 ST. PETERS, MISSOURI



CAIR SECTION 9
 PROCESS FLOW DIAGRAM - LINE 1
 WOODBRIDGE GROUP
 ST. PETERS, MISSOURI

9.05 Describe the various work area(s) shown in question 9.04 that encompass workers who may potentially come in contact with or be exposed to the listed substance. Add any additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

☐

Process type

POLYURETHANE Foam Production

Work Area ID

Description of Work Areas and Worker Activities

1

RAIL CAR UNLOADING

2

METERING PUMP CALIBRATION

3

4

5

6

7

8

9

10

☐

Mark (X) this box if you attach a continuation sheet.

72
9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type POLYURETHANE Foam Production

Work area 1

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance ¹	Average Length of Exposure Per Day ²	Number of Days per Year Exposed
<u>A</u>	<u>4</u>	<u>INHALATION</u>	<u>OL</u>	<u>E</u>	<u>24</u>

¹Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensable at ambient temperature and pressure)
GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)
SO = Solid

SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

²Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
B = Greater than 15 minutes, but not exceeding 1 hour
C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours
E = Greater than 4 hours, but not exceeding 8 hours
F = Greater than 8 hours

☒ Mark (X) this box if you attach a continuation sheet.

CBI

[]

Work area

[illegible]

¹Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensable at ambient temperature and pressure)
GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)
SO = Solid

SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid
(specify phases, e.g.,
90% water, 10% toluene)

²Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
B = Greater than 15 minutes, but not exceeding 1 hour
C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours
E = Greater than 4 hours, but not exceeding 8 hours
F = Greater than 8 hours

[]

CBI

[] Process type POLYURETHANE Foam Production

Work area 1

Labor Category

(ppm, mg/m³, other-specify)

(ppm, mg/m³, other-specify)

A

UK

UK

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1000

☒ Mark (X) this box if you attach a continuation sheet.

CBI

Work area 2

☐ Mark (X) this box if you attach a continuation sheet.

PART B WORK PLACE MONITORING PROGRAM

9.08 If you monitor worker exposure to the listed substance, complete the following table.

CBI

☐

Sample/Test	Work Area ID	Testing Frequency (per year)	Number of Samples (per test)	Who Samples ¹	Analyzed In-House (Y/N)	Number of Years Records Maintained
Personal breathing zone	N/A	N/A	N/A	N/A	N/A	N/A
General work area (air)	2	Continuous	N/A	A	Y	3 years
Wipe samples	N/A	N/A	N/A	N/A	N/A	N/A
Adhesive patches	N/A	N/A	N/A	N/A	N/A	N/A
Blood samples	N/A	N/A	N/A	N/A	N/A	N/A
Urine samples	N/A	N/A	N/A	N/A	N/A	N/A
Respiratory samples	N/A	N/A	N/A	N/A	N/A	N/A
Allergy tests	N/A	N/A	N/A	N/A	N/A	N/A
Other (specify)						
Other (specify)						
Other (specify)						

¹Use the following codes to designate who takes the monitoring samples:

A = Plant industrial hygienist

B = Insurance carrier

C = OSHA consultant

D = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

9.09 For each sample type identified in question 9.08, describe the type of sampling and analytical methodology used for each type of sample.

☐

Sample Type

Sampling and Analytical Methodology

GENERAL WORK AREA	CONTINUOUS SAMPLING THROUGH TPE SENSITIVE TAPE
	COORDINATING ANALYSIS

9.10 If you conduct personal and/or ambient air monitoring for the listed substance, specify the following information for each equipment type used.

CBI

☐

Equipment Type¹

Detection Limit²

Manufacturer

Averaging Time (hr)

Model Number

E	0.005 ppmv	MDA	CONTINUOUS	7100

¹Use the following codes to designate personal air monitoring equipment types:

- A = Passive dosimeter
- B = Detector tube
- C = Charcoal filtration tube with pump
- D = Other (specify) _____

Use the following codes to designate ambient air monitoring equipment types:

- E = Stationary monitors located within work area
- F = Stationary monitors located within facility
- G = Stationary monitors located at plant boundary
- H = Mobile monitoring equipment (specify) _____
- I = Other (specify) _____

²Use the following codes to designate detection limit units:

- A = ppm
- B = Fibers/cubic centimeter (f/cc)
- C = Micrograms/cubic meter (μm^3)

☐ Mark (X) this box if you attach a continuation sheet.

9.11 If you conduct routine medical tests for monitoring the health effects of exposure to the listed substance, specify the type and frequency of the tests.

CBI

☐

Test Description

Frequency
(weekly, monthly, yearly, etc.)

HEARING TESTS

YEARLY

RESPIRATOR FIT TESTS

ONCE A YEAR

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Painting From Production

Work area 1

Engineering Controls	Used (Y/N)	Year Installed	Upgraded (Y/N)	Year Upgraded
Ventilation:				
Local exhaust	<u>N/A</u>	<u>Two process is outdoors</u>	<u>---</u>	<u>---</u>
General dilution	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Other (specify)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Vessel emission controls	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Other (specify)	<u>Y</u>	<u>1987</u>	<u>N</u>	<u>N/A</u>
<u>Storage tank overflow protection</u>				

☒ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

2/2

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Engineering Team Protection

Work area 2

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1987</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>Y</u>	<u>1987</u>	<u>N</u>	<u>N/A</u>
Other (specify) <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Vessel emission controls	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Other (specify) <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

☐ Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type NA BUT STARTED UP JULY 8 1992 MONTHS

Work area PRIOR TO REPORTING PERIOD N/A

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)
<u>N/A</u>	<u>N/A</u>

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

1/2
9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type POLYURETHANE FOAM PRODUCTION

Work area 1

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>Y</u>
Face shields	<u>Y</u>
Coveralls	<u>Y</u>
Bib aprons	<u>Y</u>
Chemical-resistant gloves	<u>Y</u>
Other (specify)	
<u>CHEMICAL-RESISTANT BOOTS</u>	<u>Y</u>

☒ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[] Process type POSTAL MAIL ROOM RENOVATION

Work area 2

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>Y</u>
Face shields	<u>Y</u>
Coveralls	<u>Y</u>
Bib aprons	<u>Y</u>
Chemical-resistant gloves	<u>Y</u>
Other (specify)	
<u>N/A</u>	

[] Mark (X) this box if you attach a continuation sheet.

- 9.15 If workers use respirators when working with the listed substance, specify for each process type, the work areas where the respirators are used, the type of respirators used, the average usage, whether or not the respirators were fit tested, and the type and frequency of the fit tests. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type POLYURETHANE Foam Production

Work Area	Respirator Type	Average Usage ¹	Fit Tested (Y/N)	Type of Fit Test ²	Frequency of Fit Tests (per year)
<u>1</u>	<u>MSA Forced Air</u>	<u>B</u>	<u>Y</u>	<u>QL</u>	<u>WHEN HIRED</u>
<u>2</u>	<u>MSA Forced Air</u>	<u>C</u>	<u>Y</u>	<u>QL</u>	<u>WHEN HIRED</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

¹Use the following codes to designate average usage:

A = Daily
 B = Weekly
 C = Monthly
 D = Once a year
 E = Other (specify) _____

²Use the following codes to designate the type of fit test:

QL = Qualitative
 QT = Quantitative

☐ Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

- 9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this question and complete it separately for each process type and work area.

CBI

☐

Process type POLYURETHANE Foam Production

Work area 1

THE UNLOADING AREA IS A RESTRICTED ACCESS AREA AND POSTED AS SUCH.
UNLOADING OF RAIL CARS IS PERFORMED BY A TWO MAN TEAM. THESE
EMPLOYEES ARE TRAINED TO HANDLE TDI BY THE SUPPLIER AND FURTHER
TRAINED IN HEALTH SAFETY AND SPILL RESPONSE BY THE UNLOADING CORPORATION

- 9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type POLYURETHANE Foam Production

Work area 1

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping			X	
Vacuuuming	N/A	N/A	N/A	N/A
Water flushing of floors	X			
Other (specify)				

☒ Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

2/2

9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this question and complete it separately for each process type and work area.

CBI

☐

Process type

POLYURETHANE Foam Production

Work area

2

TDI PUMP CALIBRATING IS PERFORMED BY A TWO MAN TEAM WHO ARE TRAINED IN HANDLING TDI BY THE SUPPLIER AND FURTHER TRAINED IN HEALTH, SAFETY, AND SPILL RESPONSE BY THE WOODBRIDGE CORPORATION. PRODUCTION AREA IS A RESTRICTED ACCESS AREA AND CONTINUED THE HAZARDOUS ARE ALWAYS PRESENT IN THE WORK AREA.

9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type

POLYURETHANE Foam Production

Work area

2

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping			X	
Vacuuming	N/A	N/A	N/A	N/A
Water flushing of floors	X			
Other (specify)				

☐ Mark (X) this box if you attach a continuation sheet.

9.21 Do you have a written medical action plan for responding to routine or emergency exposure to the listed substance?

Routine exposure

Yes 1

No 2

Emergency exposure

Yes 1

No 2

If yes, where are copies of the plan maintained?

Routine exposure: _____

Emergency exposure: _____

9.22 Do you have a written leak and spill cleanup plan that addresses the listed substance? Circle the appropriate response.

Yes (1)

No 2

If yes, where are copies of the plan maintained? SAFETY MANAGER'S OFFICE AND WORK AREAS

Has this plan been coordinated with state or local government response organizations? Circle the appropriate response.

Yes 1

No 2

9.23 Who is responsible for monitoring worker safety at your facility? Circle the appropriate response.

Plant safety specialist 1

Insurance carrier 2

OSHA consultant 3

Other (specify) _____ 4

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 10 ENVIRONMENTAL RELEASE

General Instructions:

Complete Part E (questions 10.23-10.35) for each non-routine release involving the listed substance that occurred during the reporting year. Report on all releases that are equal to or greater than the listed substance's reportable quantity value, RQ, unless the release is federally permitted as defined in 42 U.S.C. 9601, or is specifically excluded under the definition of release as defined in 40 CFR 302.3(22). Reportable quantities are codified in 40 CFR Part 302. If the listed substance is not a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and, thus, does not have an RQ, then report releases that exceed 2,270 kg. If such a substance however, is designated as a CERCLA hazardous substance, then report those releases that are equal to or greater than the RQ. The facility may have answered these questions or similar questions under the Agency's Accidental Release Information Program and may already have this information readily available. Assign a number to each release and use this number throughout this part to identify the release. Releases over more than a 24-hour period are not single releases, i.e., the release of a chemical substance equal to or greater than an RQ must be reported as a separate release for each 24-hour period the release exceeds the RQ.

For questions 10.25-10.35, answer the questions for each release identified in question 10.23. Photocopy these questions and complete them separately for each release.

PART A GENERAL INFORMATION

10.01 Where is your facility located? Circle all appropriate responses.

CBI

- ☐ Industrial area ①
- Urban area 2
- Residential area 3
- Agricultural area 4
- Rural area 5
- Adjacent to a park or a recreational area 6
- Within 1 mile of a navigable waterway 7
- Within 1 mile of a school, university, hospital, or nursing home facility 8
- Within 1 mile of a non-navigable waterway 9
- Other (specify) 10

☐ Mark (X) this box if you attach a continuation sheet.

10.02 Specify the exact location of your facility (from central point where process unit is located) in terms of latitude and longitude or Universal Transverse Mercader (UTM) coordinates.

Latitude 33 ° 15 ' " "

Longitude 90 ° 30 ' " "

UTM coordinates Zone _____, Northing _____, Easting _____

10.03 If you monitor meteorological conditions in the vicinity of your facility, provide the following information.

Average annual precipitation inches/year

Predominant wind direction

10.04 Indicate the depth to groundwater below your facility.

Depth to groundwater meters

10.05 For each on-site activity listed, indicate (Y/N/NA) all routine releases of the listed substance to the environment. (Refer to the instructions for a definition of Y, N, and NA.)

CBI

☐

On-Site Activity

Environmental Release

	<u>Air</u>	<u>Water</u>	<u>Land</u>
Manufacturing	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Importing	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Processing	<u>Y</u>	<u>N</u>	<u>N</u>
Otherwise used	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Product or residual storage	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Disposal	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Transport	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

☐ Mark (X) this box if you attach a continuation sheet.

10.06 Provide the following information for the listed substance and specify the level of precision for each item. (Refer to the instructions for further explanation and an example.)

CBI

☐

Quantity discharged to the air kg/yr \pm ____ %

Quantity discharged in wastewaters kg/yr \pm ____ %

Quantity managed as other waste in on-site
treatment, storage, or disposal units kg/yr \pm ____ %

Quantity managed as other waste in off-site
treatment, storage, or disposal units kg/yr \pm ____ %

☐ Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI



Process type POLYURETHANE Foam Production

<u>Stream ID Code</u>	<u>Control Technology</u>	<u>Percent Efficiency</u>
<u>7D, 7Q</u>	<u>DELIVERY TO POLYURETHANOL VOLUMES</u>	<u>UK</u>
	<u>WELDED FITTINGS AND GASKET SEALLESS</u>	
	<u>PUMPS TO PREVENT RELEASES</u>	
<u>7L, 7H, 7J, 7K, 7R,</u>	<u>OPTIMIZED STEADY-STATE AND DELIVERY</u>	<u>UK</u>
<u>7U, 7W, 7Y</u>	<u>RATES MINIMIZES EMISSIONS IN THESE</u>	
	<u>EXHAUST STREAMS</u>	

☐ Mark (X) this box if you attach a continuation sheet.

PART B RELEASE TO AIR

10.09 Point Source Emissions -- Identify each emission point source containing the listed substance in terms of a Stream ID Code as identified in your process block or residual treatment block flow diagram(s), and provide a description of each point source. Do not include raw material and product storage vents, or fugitive emission sources (e.g., equipment leaks). Photocopy this question and complete it separately for each process type.

CBI

☐

Process type

Recovering from Pollution

Point Source
ID Code

Description of Emission Point Source

7E
7H
7J
7L
7R
7U
7W
7Y

POURING AREA EXHAUST LINE 1
OVEN EXHAUST LINE 1
PERMEX EXHAUST LINE 1
CRUSHER EXHAUST LINE 1
POURING AREA EXHAUST LINE 2
OVEN EXHAUST LINE 2
PERMEX EXHAUST LINE 2
CRUSHER EXHAUST LINE 2

☐ Mark (X) this box if you attach a continuation sheet.

☐ Mark (X) this box if you attach a continuation sheet.

10.10 Emission Characteristics -- Characterize the emissions for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

Point Source ID Code	Physical State ¹	Average Emissions (kg/day)	Frequency ² (days/yr)	Duration ³ (min/day)	Average Emission Factor ⁴	Maximum Emission Rate (kg/min)	Maximum Emission Rate Frequency (events/yr)	Maximum Emission Rate Duration (min/event)
75	G	2.82 million	240	Continuous	0.0000017	0.00000037	Continuous	Continuous
74	G	1.1 million	240	Continuous	0.000002	0.00000043	Continuous	Continuous
71	G	0.95 million	240	Continuous	0.00000157	0.00000012	Continuous	Continuous
72	G	0.55 million	240	Continuous	0.00000035	0.00000054	Continuous	Continuous
7R	G	0.67 million	240	Continuous	0.00000012	0.00000037	Continuous	Continuous
7D	G	1.1 million	240	Continuous	0.0000002	0.00000043	Continuous	Continuous
7W	G	0.44 million	240	Continuous	0.00000054	0.00000012	Continuous	Continuous
7Y	G	2.74 million	240	Continuous	0.00000025	0.00000054	Continuous	Continuous

¹Use the following codes to designate physical state at the point of release:
G = Gas; V = Vapor; P = Particulate; A = Aerosol; O = Other (specify) _____

²Frequency of emission at any level of emission

³Duration of emission at any level of emission

⁴Average Emission Factor -- Provide estimated (\pm 25 percent) emission factor (kg of emission per kg of production of listed substance)

10.11 Stack Parameters -- Identify the stack parameters for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

☐

Point Source ID Code	Stack Height(m)	Stack Inner Diameter (at outlet) (m)	Exhaust Temperature (°C)	Emission Exit Velocity (m/sec)	Building Height(m) ¹	Building Width(m) ²	Vent Type ³
7E	16.2	0.86	24	16.2	8.5	149	V
7H	16.2	0.86	65.4	20.2	8.5	149	V
7I	16.2	0.86	24	10.1	8.5	149	V
7L	16.2	0.86	24	10.1	8.5	149	V
7R	16.2	0.86	24	12.1	8.5	149	V
7U	16.2	0.86	55.6	20.2	8.5	149	V
7W	16.2	0.86	24	8.1	8.5	149	V
7Y	16.2	0.86	24	8.1	8.5	149	V

¹Height of attached or adjacent building

²Width of attached or adjacent building

³Use the following codes to designate vent type:

H = Horizontal

V = Vertical

☐ Mark (X) this box if you attach a continuation sheet.

10.12 If the listed substance is emitted in particulate form, indicate the particle size distribution for each Point Source ID Code identified in question 10.09. Photocopy this question and complete it separately for each emission point source.

CBI

☐

Point source ID code

Size Range (microns)

Mass Fraction (% ± % precision)

< 1

≥ 1 to < 10

≥ 10 to < 30

≥ 30 to < 50

≥ 50 to < 100

≥ 100 to < 500

≥ 500

Total = 100%

☐ Mark (X) this box if you attach a continuation sheet.

PART C FUGITIVE EMISSIONS

10.13 Equipment Leaks -- Complete the following table by providing the number of equipment types listed which are exposed to the listed substance and which are in service according to the specified weight percent of the listed substance passing through the component. Do this for each process type identified in your process block or residual treatment block flow diagram(s). Do not include equipment types that are not exposed to the listed substance. If this is a batch or intermittently operated process, give an overall percentage of time per year that the process type is exposed to the listed substance. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type
Percentage of time per year that the listed substance is exposed to this process type %

Equipment Type	Number of Components in Service by Weight Percent of Listed Substance in Process Stream					Greater than 99%
	Less than 5%	5-10%	11-25%	26-75%	76-99%	
Pump seals ¹						
Packed	N/A	N/A	N/A	N/A	N/A	3
Mechanical	N/A	N/A	N/A	N/A	N/A	N/A
Double mechanical ²	N/A	N/A	N/A	N/A	N/A	N/A
Compressor seals ¹	N/A	N/A	N/A	N/A	N/A	N/A
Flanges	N/A	N/A	N/A	N/A	N/A	12
Valves						
Gas ³	N/A	N/A	N/A	N/A	N/A	N/A
Liquid	N/A	N/A	N/A	N/A	N/A	12
Pressure relief devices ⁴ (Gas or vapor only)	N/A	N/A	N/A	N/A	N/A	N/A
Sample connections						
Gas	N/A	N/A	N/A	N/A	N/A	N/A
Liquid	N/A	N/A	N/A	N/A	N/A	6
Open-ended lines ⁵ (e.g., purge, vent)						
Gas	N/A	N/A	N/A	N/A	N/A	N/A
Liquid	N/A	N/A	N/A	N/A	N/A	N/A

¹List the number of pump and compressor seals, rather than the number of pumps or compressors

10.13 continued on next page

☐ Mark (X) this box if you attach a continuation sheet.

10.13 (continued)

²If double mechanical seals are operated with the barrier (B) fluid at a pressure greater than the pump stuffing box pressure and/or equipped with a sensor (S) that will detect failure of the seal system, the barrier fluid system, or both, indicate with a "B" and/or an "S", respectively

³Conditions existing in the valve during normal operation

⁴Report all pressure relief devices in service, including those equipped with control devices

⁵Lines closed during normal operation that would be used during maintenance operations

10.14 Pressure Relief Devices with Controls -- Complete the following table for those pressure relief devices identified in 10.13 to indicate which pressure relief devices in service are controlled. If a pressure relief device is not controlled, enter "None" under column c.

CBI

[]

[illegible]

¹Refer to the table in question 10.13 and record the percent range given under the heading entitled "Number of Components in Service by Weight Percent of Listed Substance" (e.g., <5%, 5-10%, 11-25%, etc.)

²The EPA assigns a control efficiency of 100 percent for equipment leaks controlled with rupture discs under normal operating conditions. The EPA assigns a control efficiency of 98 percent for emissions routed to a flare under normal operating conditions

☐ Mark (X) this box if you attach a continuation sheet.

10.15 Equipment Leak Detection -- If a formal leak detection and repair program is in place, complete the following table regarding those leak detection and repair procedures. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type POLYURETHANE Foam Production

Equipment Type	Leak Detection Concentration (ppm or mg/m ³) Measured at <u>VARIOUS</u> Inches from Source	Detection Device ¹	Frequency of Leak Detection (per year)	Repairs Initiated (days after detection)	Repairs Completed (days after initiated)
Pump seals					
Packed	<u>0.005 ppm</u>	<u>FPM 0</u>	<u>CONTINUOUS</u>	<u>IMMEDIATELY</u>	<u>ASAP</u>
Mechanical	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Double mechanical	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Compressor seals	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Flanges	<u>0.025 ppm</u>	<u>FPM 0</u>	<u>CONTINUOUS</u>	<u>IMMEDIATELY</u>	<u>ASAP</u>
Valves					
Gas	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Liquid	<u>0.005 ppm</u>	<u>FPM 0</u>	<u>CONTINUOUS</u>	<u>IMMEDIATELY</u>	<u>ASAP</u>
Pressure relief devices (gas or vapor only)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Sample connections					
Gas	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Liquid	<u>0.005 ppm</u>	<u>FPM 0</u>	<u>CONTINUOUS</u>	<u>IMMEDIATELY</u>	<u>ASAP</u>
Open-ended lines					
Gas	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Liquid	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

¹Use the following codes to designate detection device:

POVA = Portable organic vapor analyzer

FPM = Fixed point monitoring

0 = Other (specify)

Visual Inspection

☐ Mark (X) this box if you attach a continuation sheet.

☐ Mark (X) this box if you attach a continuation sheet.

10.16 Raw Material, Intermediate and Product Storage Emissions - - Complete the following table by providing the information on each liquid raw material, intermediate, and product storage vessel containing the listed substance as identified in your process block or residual treatment block flow diagram(s).

CBI

☐

Vessel Type ¹	Floating Roof Seals ²	Composition of Stored Materials ³	Throughput (liters per year)	Vessel Filling Rate (gpm)	Vessel Filling Duration (min)	Vessel Inner Diameter (m)	Vessel Height (m)	Operating Volume (l)	Vessel Emission Controls ⁴	Design Flow Rate ⁵	Vent Diameter (cm)	Control Efficiency (%)	Basis for Estimate ⁶
I	N/A	100 (100)	0.6 million	43.8	420	3.5	5.6	51,100	NONE	N/A	5.1	N/A	N/A
II	N/A	100 (100)	0.6 million	43.8	420	3.5	5.6	51,100	NONE	N/A	5.1	N/A	N/A

¹Use the following codes to designate vessel type:

F = Fixed roof
 CIF = Contact internal floating roof
 NCIF = Noncontact internal floating roof
 EFR = External floating roof
 P = Pressure vessel (indicate pressure rating)
 H = Horizontal
 U = Underground

²Use the following codes to designate floating roof seals:

MS1 = Mechanical shoe, primary
 MS2 = Shoe-mounted secondary
 MS2R = Rim-mounted, secondary
 LM1 = Liquid-mounted resilient filled seal, primary
 LM2 = Rim-mounted shield
 LMW = Weather shield
 VM1 = Vapor mounted resilient filled seal, primary
 VM2 = Rim-mounted secondary
 VMW = Weather shield

³Indicate weight percent of the listed substance. Include the total volatile organic content in parenthesis

⁴Other than floating roofs

⁵Gas/vapor flow rate the emission control device was designed to handle (specify flow rate units)

⁶Use the following codes to designate basis for estimate of control efficiency:

C = Calculations
 S = Sampling

PART E NON-ROUTINE RELEASES

10.23 Indicate the date and time when the release occurred and when the release ceased or was stopped. If there were more than six releases, attach a continuation sheet and list all releases.

Release	Date Started	Time (am/pm)	Date Stopped	Time (am/pm)
1	<i>1/14</i>	<i>10/10</i>	<i>1/16</i>	<i>11/10</i>
2				
3				
4				
5				
6				

10.24 Specify the weather conditions at the time of each release.

Release	Wind Speed (km/hr)	Wind Direction	Humidity (%)	Temperature (°C)	Precipitation (Y/N)
1					
2					
3					
4					
5					
6					

☐ Mark (X) this box if you attach a continuation sheet.

APPENDIX I: List of Continuation Sheets

Attach continuation sheets for sections of this form and optional information after this page. In column 1, clearly identify the continuation sheet by listing the question number to which it relates. In column 2, enter the inclusive page numbers of the continuation sheet for each question number.

Question Number
(1)

Continuation
Sheet
Page Numbers
(2)

7.04 Page No 45

1 ADDITIONAL PAGE

7.05 Page No. 46

3 ADDITIONAL PAGES

7.06 Page No. 47

9 ADDITIONAL PAGES

9.06 Page No. 93

1 ADDITIONAL PAGE

9.07 Page No. 94

1 ADDITIONAL PAGE

9.12 Page No. 98

1 ADDITIONAL PAGE

9.14 Page No. 100

1 ADDITIONAL PAGE

9.17 & 9.20 Page No. 105

1 ADDITIONAL PAGE

7.01 & 7.03 FLOW DIAGRAMS INSERTED

9.09 Page No. 91 FLOW DIAGRAMS INSERTED

☐ Mark (X) this box if you attach a continuation sheet.

MATERIAL SAFETY DATA SHEET

BASF Corporation Chemicals Division
 400 Cherry Hill Road, Parsippany, New Jersey 07054 (201) 316-3000
 HMIS: H4 F1 R1

BASF

PRODUCT NUMBER: E35821

LUPRANATE® T80-Type 1

SECTION I

*Registered Trademark

TRADE NAME: LUPRANATE® T80-Type 1

CHEMICAL NAME: Toluene Diisocyanate

SYNONYMS: TDI; Toluene Diisocyanate

FORMULA: CH₃C₆H₄(NCO)₂

CHEMICAL FAMILY: Aromatic Isocyanates

MOL. WGT.: 174.18

SECTION II - INGREDIENTS

COMPONENT	CAS NO.	%	FEL/TLV - SOURCE
LUPRANATE® T80-Type 1 Contains:		100	Not established
2,4 Toluene Diisocyanate	524-54-8	80	0.005 ppm, ACGIH 0.02 ppm STEL, ACGIH 0.02 ppm Ceiling, OSHA
2,6 Toluene Diisocyanate	91-08-7	20	

SARA Title III Sect. 313: Listed.
 All components are in TSCA inventory.

SECTION III - PHYSICAL DATA

BOILING/MELTING POINT @760 mm Hg: 484°F / N/A	pH: N/A
VAPOR PRESSURE mm Hg @20 °C: 0.025	Vapor Density (Air=1): 8.0
SPECIFIC GRAVITY OR BULK DENSITY: 1.22	Freezing Point: 51.8-53.0°F
SOLUBILITY IN WATER: Water reacts	
APPEARANCE: Colorless liquid	ODOR: Pungent
	INTENSITY: Strong

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD): 270°F TAO Open Cup	AUTOIGNITION TEMP: >520°F
FLAMMABILITY LIMITS IN AIR (% BY VOL)	LOWER: 0.5% UPPER: 8.5%
EXTINGUISHING MEDIUM	Use water fog, foam or CO2 extinguishing media.
SPECIAL FIREFIGHTING PROCEDURES	Personnel engaged in fighting isocyanate fires must be protected against nitrogen dioxide fumes as well as isocyanate vapors. Firefighters must wear self-contained breathing apparatus and turnout gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Avoid water contamination in closed containers or confined areas; carbon dioxide gas is generated.

EMERGENCY TELEPHONE NUMBER

CHEMTREC 800-424-9300

201-316-3000

THIS NUMBER IS AVAILABLE 24 HOURS, DAYS, NIGHTS, WEEKENDS, AND HOLIDAYS

PRODUCT NUMBER: 885621 LUPRANATE* T80-Type 1

SECTION V - HEALTH DATA

TOXICOLOGICAL TEST DATA:

LUPRANATE* T80-Type 1

2,4 Toluene Diisocyanate

Rat, Oral LD50

Mouse, Inhalation LC50

RESULT:

Severe eye and skin
irritant, sensitizer
5.8 g/kg.
10 ppm/4H

EFFECTS OF OVEREXPOSURE:

The primary routes of exposure to this material are eye or skin contact, and inhalation. Inhalation of the vapors causes severe irritation to lungs, and pulmonary edema can occur after a serious vapor exposure. Liquid contact causes serious skin and eye burns. Pulmonary sensitization can occur in some individuals leading to asthma-type spasms of the bronchial tubes and difficulty in breathing. Preclude from exposure those individuals having a history of respiratory illness, asthmatic conditions, eye damage or TDI sensitization. Recent studies indicate that overexposure may be associated with chronic lung impairment. In a National Toxicology Program (NTP) study, TDI was carcinogenic when given orally to rats and mice at maximum tolerated doses. TDI was not carcinogenic to rats in a two-year inhalation study. Based on the results of the oral study, TDI was included in the NTP Annual Report on Carcinogens.

FIRST AID PROCEDURES:

Existing medical conditions aggravated by exposure to this material:
Pulmonary disorders.

Eyes-Immediately wash eyes with running water for 15 minutes.
Get immediate medical attention.

Skin-Wash affected areas with water while removing contaminated clothing. Get immediate medical attention. Launder contaminated clothing before reuse.

Ingestion-If swallowed, DO NOT INDUCE VOMITING. Dilute with water or milk and get immediate medical attention. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Inhalation-Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

SECTION VI - REACTIVITY DATA

STABILITY: Stable.

CONDITIONS TO AVOID: Avoid temperatures >40°C for extended periods of time.

CHEMICAL INCOMPATIBILITY: Water, basic compounds, alcohols, acids, amines.

HAZARDOUS DECOMPOSITION PRODUCTS: TDI vapors, NO_x, CO and HCN.

HAZARDOUS POLYMERIZATION: May occur. Avoid contamination with moisture and other products that react with isocyanates.

CONDITIONS TO AVOID:

CORROSIVE TO METAL: No

OXIDIZER: No

SECTION VII - SPECIAL PROTECTION

RESPIRATORY PROTECTION:

NIOSH/MSHA approved respiratory equipment for transfer operations or escape. Self-contained breathing apparatus if the P.E.L. is exceeded, or in confined areas or if a leak occurs.

EYE PROTECTION: Wear fitted goggles or face shield and safety glasses.

PROTECTIVE CLOTHING: Rubber gloves, coveralls, boots and rubber apron which must be cleaned after each use. Hardhat for head protection.

VENTILATION: Use local exhaust wherever vapors are generated.

OTHER: Maintain work area below P.E.L. Vented vapors should be scrubbed through carbon filters or other similarly effective media.

PRODUCT NUMBER: 585821 LUPRANATE® T80-Type 1

SECTION VIII - ENVIRONMENTAL DATA**ENVIRONMENTAL TOXICITY DATA:**

Aquatic toxicity rating: TLM 88: 10 ppm - 1 ppm.

SPILL AND LEAK PROCEDURES:

LUPRANATE® T80 is a RCRA-regulated product. Wear protective clothing, evacuate all not involved in the cleanup. For minor spills, absorb with absorbent and containerize into open top drums. Decontaminate spill area with a mixture of 50% water, 5% concentrated ammonia and 2% detergent.

HAZARDOUS SUBSTANCE SUPERFUND: Yes RQ (lbs): 100

WASTE DISPOSAL METHOD:

Dispose of waste in a RCRA-permitted facility.
Incinerate or landfill in a RCRA-permitted facility.

HAZARDOUS WASTE 40CFR261: Yes

HAZARDOUS WASTE NUMBER: U 223

CONTAINER DISPOSAL:

Containers should be neutralized with liquid decontaminant. Empty containers, containing less than 1" of residue, may be landfilled. If containers are not empty, they must be disposed as a hazardous waste in a RCRA-licensed facility.

SECTION IX - SHIPPING DATA

D.O.T. PROPER SHIPPING NAME (49CFR172.101-102)

Toluene Diisocyanate

HAZARDOUS SUBSTANCE
(49CFR CERCLA LIST)

Yes

REPORTABLE QUANTITY (RQ) 100 lb

D.O.T. HAZARD CLASSIFICATION (CFR172.101-102)

PRIMARY

Poison B

SECONDARY

D.O.T. LABELS REQUIRED (49CFR172.101-102)

Poison

D.O.T. PLACARDS
REQUIRED (CFR172.504)BULK ONLY
Poison-2078POISON CONSTITUENT
(49CFR172.203(K))
TDI**BILL OF LADING DESCRIPTION**

Toluene Diisocyanate-Poison B-UN 2078 RQ 100 lbs.
*** Placarded: POISON ***

CC NO. 180

UN/NA CODE 2078

DATE PREPARED: 4 / 17 / 88

UPDATED: 5 / 18 / 88

WHILE BASF CORPORATION BELIEVES THE DATA SET FORTH HEREIN ARE ACCURATE AS OF THE DATE HEREOF, BASF CORPORATION MAKES NO WARRANTY WITH RESPECT THERETO AND EXPRESSLY DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. SUCH DATA ARE OFFERED SOLELY FOR YOUR CONSIDERATION, INVESTIGATION, AND VERIFICATION.

SECTION X - PRODUCT LABEL

LUPRANATE® T80-Type 1

DANGER: POISON**HARMFUL IF INHALED.**

CONTACT WITH EYES AND SKIN RESULTS IN SERIOUS BURNS. INHALATION OF VAPORS CAUSES SEVERE IRRITATION TO LUNGS. PULMONARY EDEMA MAY OCCUR. PULMONARY SENSITIZATION CAN OCCUR IN SOME INDIVIDUALS, LEADING TO ASTHMA-TYPE SPASMS OF THE BRONCHIAL TUBES AND DIFFICULTY IN BREATHING. INDIVIDUALS WITH A HISTORY OF RESPIRATORY ILLNESS, ASTHMATIC CONDITIONS, EYE DAMAGE OR TOI SENSITIZATION SHOULD NOT BE EXPOSED TO THIS PRODUCT.

IN AN NTP STUDY, TOI WAS CARCINOGENIC TO RODENTS GIVEN HIGH ORAL DOSES AND IS INCLUDED IN THE NTP ANNUAL REPORT ON CARCINOGENS. TOI WAS NOT CARCINOGENIC TO RATS IN A TWO-YEAR INHALATION STUDY.

Use with local exhaust. Wear an approved respirator or self-contained breathing apparatus, fitted goggles or face shield and safety glasses, rubber gloves, coveralls, boots, apron and other protective clothing as necessary to prevent contact.

FIRST AID:

Eyes-Immediately wash eyes with running water for 15 minutes. Get immediate medical attention.

Skin-Wash affected areas with water while removing contaminated clothing. Get immediate medical attention. Launder contaminated clothing before reuse.

Ingestion-If swallowed, DO NOT INDUCE VOMITING. Dilute with water or milk and get immediate medical attention. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Inhalation-Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

HANDLING AND STORAGE: Keep containers closed and store in a well-ventilated place. Outage of container should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture. Contamination by moisture or basic compounds can cause dangerous pressure buildup in closed container. Store above 80 F to prevent freezing and isomer separation. If solidified, do not exceed 85 F while thawing to prevent discoloration. Mix before using.

IN CASE OF SPILLS OR LEAKS: Material is a RCRA-regulated product. Spills should be contained, absorbed and placed in suitable containers for disposal in a RCRA-licensed facility.

IN CASE OF FIRE: Use water fog, foam or CO2 extinguishing media. Firefighters should be equipped with self-contained breathing apparatus and turnout gear for protection against TOI vapors and toxic decomposition products.

EMPTY CONTAINERS: All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Do not reuse this container unless it is professionally cleaned and reconditioned.

DISPOSAL: Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations. Refer to our Material Safety Data Sheet for specific disposal instructions.

IN CASE OF CHEMICAL EMERGENCY: Call CHEMTREC day or night for assistance and information concerning spilled material, fire, exposure and other chemical accidents 800-424-9300.

ATTENTION: This product is sold solely for use by industrial institutions. Refer to our Technical Bulletin and Material Safety Data Sheet regarding safety, usage, applications, hazards, procedures and disposal of this product. Consult your supervisor for additional information.

FOR INDUSTRY USE ONLY.

CAS No.: 584-84-9; 61-08-7.

Proper Shipping Name: Toluene Diisocyanate, Poison B - UN 3075 RQ

Made in USA.

Polymers

0488

**FEDERAL
EXPRESS****AIRBILL**USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO.
QUESTIONS? CALL 800-238-5355 TOLL FREE.**PACKAGE
TRACKING NUMBER****8265158580**

8164M

8265158580**RECIPIENT'S COPY**

Date 8/2/89			
From (Your Name) Please Print MARY VALDERRAMA		Your Phone Number (Very Important) (314) 279-1002	
Company WOODBRIIDGE FOAM CORP		Department/Floor No.	
Street Address 11 CERMAK BLVD		To (Recipient's Name) Please Print CAIR REPORTING OFFICE	
City ST PETERS		Recipient's Phone Number (Very Important) ()	
State MO		Company DOCUMENT PROCESSING CENTER	
ZIP Required 63376		Department/Floor No.	
		U.S. ENVIRONMENTAL PROTECTION AGENCY	
		Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. ® Zip Codes.) 401 M STREET, N.W.	
		City WASHINGTON, D.C.	
		State 20460	
		ZIP Required	

YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.)**IF HOLD FOR PICK-UP, Print FEDEX Address Here**

PAYMENT <input type="checkbox"/> Bill Sender <input type="checkbox"/> Bill Recipient's FedEx Acct. No. <input type="checkbox"/> Bill 3rd Party FedEx Acct. No. <input type="checkbox"/> Bill Credit Card		Street Address	
<input type="checkbox"/> Cash		City	
		State	
		ZIP Required	

SERVICES		DELIVERY AND SPECIAL HANDLING		PACKAGES	WEIGHT	YOUR DECLARED VALUE	OVER SIZE	Emp. No.	Date	Federal Express Use
1 <input type="checkbox"/> PRIORITY 1 Overnight Delivery	6 <input type="checkbox"/> OVERNIGHT LETTER*	1 <input type="checkbox"/> HOLD FOR PICK-UP (Fill in Box H)		1	3.0	\$1.00				Base Charges
2 <input type="checkbox"/> COURIER-PAK OVERNIGHT ENVELOPE*	7 <input type="checkbox"/>	2 <input type="checkbox"/> THURS DELIVER WEEKDAY			LBS					Declared Value Charge
3 <input type="checkbox"/> OVERNIGHT BOX	8 <input type="checkbox"/>	3 <input type="checkbox"/> DELIVER SATURDAY (Extra charge)			LBS					Other 1
4 <input type="checkbox"/> OVERNIGHT TUBE	9 <input type="checkbox"/>	4 <input type="checkbox"/> DAANGEROUS GOODS (Extra charge)			LBS					Other 2
5 <input type="checkbox"/> STANDARD AIR Delivery not later than second business day	10 <input type="checkbox"/>	5 <input type="checkbox"/> CONSTANT SURVEILLANCE SERVICE (CSS) (Extra charge) (Release Signature Not Applicable)		Total	Total	Total				Total Charges
		6 <input type="checkbox"/> DRY ICE Lbs.		1	3.0	\$1.00				PART #111800 REVISION DATE 1/88 PRINTED IN U.S.A. NCREC 009 © 1988 F.E.C.
		7 <input type="checkbox"/> OTHER SPECIAL SERVICE								
		8 <input type="checkbox"/>								
		9 <input type="checkbox"/> SATURDAY PICK-UP (Extra charge)								
		10 <input type="checkbox"/>								
		11 <input type="checkbox"/>								
		12 <input type="checkbox"/> HOLIDAY DELIVERY (If offered) (Extra charge)								

Received At 1 <input type="checkbox"/> Regular Stop 2 <input type="checkbox"/> On-Call Stop 3 <input type="checkbox"/> Drop Box 4 <input type="checkbox"/> B.S.C. 5 <input type="checkbox"/> Station	FEDEX Corp. Employee No.	5
Date/Time for FEDEX Use		
Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.		
Release Signature: <i>[Signature]</i>		